

The Examiner also rejected claim 15 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Specifically, the Examiner found unclear what one of ordinary skill in the art would consider as a high-powered water spray gun and what was sensing the presence of the car. The Examiner also found the term “said sensor” to be lacking in positive antecedent basis, and that claim 15 failed to recite the positive step of washing the car. Finally, the Examiner found the language of the claim to be indefinite because it was unclear whether the interior or exterior of the car was being washed. The language of claim 15 has been amended accordingly.

Finally, the Examiner also rejected claim 15 under 35 U.S.C. §103(a) as being unpatentable over McGuire (U.S. Patent No. 6,287,389) in view of Ueno et al. (U.S. Patent App. No. US2002/0007230).

Claim 15, as amended, now provides for:

15. (AMENDED) A method for washing the exterior surface of a car within an automated car wash, said method comprising the steps of:  
    providing a water spray gun;  
    providing an anthropomorphic mechanized robot in a fixed position, said robot having at least one appendage for receiving and operating said spray gun, said robot further including a plurality of mechanical linkages;  
    providing a sensor for sensing the presence of said car in proximity to said mechanized robot;  
    sensing the presence or absence of said car using said sensor;  
    alternately activating said robot and said spray gun when said sensor detects the presence of said car and deactivating said robot and said spray gun when said sensor does not detect the presence of said car;  
    operating said spray gun in a predetermined pattern to wash said exterior surface of said car upon said activation of said robot and said spray gun; and  
    controlling the movement of said linkages to simulate lifelike movement of said robot and to entertain the occupants of said car during washing.

The significance of the subject invention as defined by Claim 1 (amended) is that it provides a method for washing a car using a mechanized anthropomorphic robot fixed in position in an automated car wash, wherein the robot is capable of operating a water spray gun for washing the car and further capable of simulating the lifelike movement of a human so as to entertain or otherwise occupy the attention of the occupants of a car during the wash cycle. A magnetic sensor is used to detect the presence of the car in front of the robot during the wash cycle, which sensor turns on the spray gun and initiates operation of the robot.

The references cited by the Examiner fail to teach or suggest such a unique combination. The patent to McGuire (U.S. Patent No. 6,287,389) was cited by the Examiner to show washing an automobile by spraying with a high pressure water jet from a nozzle 200 in mechanical engagement with a robotically controlled arm 101. It should be appreciated that the method taught by McGuire is for the removal of one or more layers of paint or protective coatings from the surface of a stationary vehicle using a computer controlled device using an "ultra-high pressure" jet of water of between 25,000 and 60,000 p.s.i. of pressure. Such is not the case with the anthropomorphic robot of the present invention. The claimed method of the present invention is limited to the washing of a car, using a spray gun of about 1,000 p.s.i. of pressure, of the type typically used in car washes. The car in the present invention is not fixed in position as is required by McGuire, but rather is proceeding through an automated car wash. The process of McGuire would be impossible if the car was moving, inasmuch as the complex mapping of the surfaces of the car required for the removal of the paint could not be processed, and the robotic arm, which must be very close to the surface of the car in McGuire in order for the pressurized water to remove the paint, would constantly be striking the surface of the car. The method of the

present invention does not require any complex programming or computerization, but rather relies primarily on simple up and down and side to side motions for operation of the spray gun.

Furthermore McGuire neither teaches nor suggests the additional motions of the robot to simulate lifelike movement, which motions are integral to the operation of the robot of the present invention, since the robot serves as much an entertainment function as it does a utilitarian one.

While the Examiner claims that McGuire teaches the sensing the presence of a car, there is no such teaching. Rather, McGuire teaches mapping the areas of the automobile to a high degree of accuracy. The method of McGuire is not initiated until a car is placed in a fixed position, and the termination of the movement of the robotic arm is not triggered by the car being removed from that fixed position, but rather the termination of the paint removal process. Such is not the case in the method of the present invention in which the sensing of a car moving into position initiates the robot and spray gun, and when the car moves out of position, the robot and spray gun terminate.

The Examiner concedes that McGuire fails to teach an anthropomorphic robot, but cites Ueno et al. to teach a robotic arm and the advantages of a movable type humanoid robot which can operate in an unlimited area. However, such is not the case with the anthropomorphic robot of the present invention. It is fixed in position in an automated car wash, usually at the beginning of the car wash, but some times at the end thereof. Movement thereof is unnecessary and in fact contrary to its function.

Finally, the Examiner states that the modification of the robotic arm to that of an anthropomorphic robot represents an aesthetic design change, and that matters relating to

ornamentation cannot be relied upon to patentably distinguish a claimed invention from the prior art. Applicants respectfully disagree with the Examiner's position that the modification of the robotic arm to an anthropomorphic robot was merely an aesthetic design change. The anthropomorphic robot of the present invention serves much more than merely the purpose of washing a car. It also serves to entertain or otherwise distract the occupants of the car, such as by waving or dancing or otherwise moving in a comical fashion, for example. This function would not be possible with the robotic arm of McGuire. There is no teaching in either McGuire or Ueno to provide such an anthropomorphic robot capable of mimicking lifelike movements for entertainment purposes.

The prior art made of record and not relied upon has also been considered by applicants and has been found to be no more relevant than the prior art relied upon by the Examiner.

For the aforementioned reasons, applicant submits that amended claim 15 patentably distinguishes over the references cited by the Examiner taken alone or in combination. None of these references teach or suggest the unique combination of the mechanized anthropomorphic robot capable of washing a car using a water spray gun in an automated car wash while also simulating lifelike human movement so as to entertain or otherwise distract the occupants of the car. Applicants further submit that dependent claims 16-23 patentably distinguish over the references of record for the same reason as claim 15 (amended), and are therefore also in condition for immediate allowance.

In light of the amendments and remarks, applicant respectfully submits that this application is now in condition for allowance, and an early Notice of Allowance is hereby respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "James G. Coplit".

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